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COLLEGE OF AGRICULTURE

UNIVERSITY FARM SCHOOL

DAVIS, CALIFORNIA

Announcement for 1913-1914

JUNE, 1913

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1912-13. No. 17

UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
BERKELEY

AGRICULTURAL EXPERIMENT STATION

BENJ. IDE WHEELER, PRESIDENT
THOMAS F. HUNT, DEAN AND DIRECTOR
H. E. VAN NORMAN, VICE-DIRECTOR
AND DEAN UNIVERSITY FARM SCHOOL

UNIVERSITY FARM SCHOOL
DAVIS, CALIFORNIA

ANNOUNCEMENTS OF
Three-Year Course in Agriculture
for 1913-1914

AND

Agricultural Short Courses
for 1913

CALENDAR, 1913-14

Sept. 19-22 First half year opens.

Sept. 19 Entrance examinations.

Sept. 20 Registration day.

Sept. 22 Class work begins.

Dec. 19 }

1914 Jan. 4 }

Christmas recess.

Jan. 5 Class work resumed.

Jan. 24-30 Examination week.

Jan. 31 }

Feb. 2 }

Second half-year opens.

Jan. 31 Registration day.

Feb. 2 Class work begins.

May 16 Annual Picnic.

May 22 Commencement Day.

Sept. 18-21 First half-year opens.

Sept. 18 Entrance examinations.

Sept. 19 Registration day.

Sept. 21 Class work begins.

UNIVERSITY FARM SCHOOL

DAVIS, CALIFORNIA

UNIVERSITY FARM

This farm, which was purchased in accordance with a California statute of 1905, comprises 779 acres of fine alluvial soil and is situated at Davis, Yolo County. The farm is provided with adequate buildings for instruction in practical agriculture and horticulture, including a commercial creamery, stock judging pavilion, horticultural building, dairy barn, horse barn, cereal building, mechanical shops, poultry building, two dormitories and one dining hall. New buildings provided by the 1913 Legislature include a new dormitory, the enlargement of the dining hall, and new class room and library buildings.

The Purpose of the University Farm School is to give three years of useful training, chiefly in Agriculture, to young men who are eighteen years of age or older, and who have not the preparation for entrance upon a University course in Agriculture, or who do not desire that type of education. Young men who have completed the regular course in a recognized high school should be able to secure sufficient credits to complete the agricultural work in two years.

ENTRANCE REQUIREMENTS

Applicants must be eighteen years of age, or be graduates of high schools of recognized standing. Those who are not graduates of a high school must pass entrance examinations in arithmetic and English as evidence of their skill in the use of these subjects.

The Entrance Examination in Arithmetic will include the application of arithmetic through fractions and decimals to ordinary problems.

The Entrance Examination in English will consist of the writing of an essay to indicate the applicant's ability to express himself logically and clearly, to use words correctly and with due attention to punctuation, spelling and neatness.

Credentials.—Evidence of good moral character is required from every applicant; also a satisfactory recommendation from the school last attended. Applications for admission should be accompanied by the necessary credentials. They should be sent to H. E. Van Norman, Dean of the University Farm School so as to reach him, if possible, before September 1st. Arrangements for board and room should also be made in advance. A deposit of \$3.00 should be sent with the application for a room in the dormitory to ensure its reservation. This sum will be applied to the first month's room rent.

EXPENSES

Board may be secured in the school dining hall at \$20.00 per month. **Rooms** in the dormitories—one in a room—at \$6.00 or \$7.00 per month, and two in a room at \$4.00 or \$5.00 per month, each. To a limited extent, board and room may be secured in the village of Davis at substantially the same prices.

Books and Regular School Supplies cost from \$15 to \$25 per year. **Special Clothing** such as white suits for creamery and dark overalls and jumpers for shop and field work cost \$1 each and may be purchased locally if desired.

Fees.—Tuition is free. A registration fee of \$5 per semester to cover incidental expenses is charged each student. This is \$15 to non-residents of the state. In some laboratory courses where considerable material is placed at the disposal of the students, a deposit is charged at the beginning of the work, the unused portion being refunded at the completion of the work.

The Expenses Necessary for an eight months year vary from \$225 to \$275, as indicated by the following table:

Table board, per month.....	\$20 to	\$160 per year
Room rent, one in room, per month.....	4 to \$5	
Room rent, two in room, each, per month.....	6 to 7	56 per year
Books and other supplies, per year.....	15 to	25 per year
Registration fee, for residents of state.....	10 per year	
Necessary expense for residents of state, per year.....	\$251	per year
Registration fee for non-residents of state.....	30	per year
Necessary expense for non-residents of state, per year.....	271	per year

Dormitory Furnishings.—Dormitory rooms are supplied with all necessary furniture: rug, bed with mattress and pillow, dresser, study-table and chairs. Bed linen and blankets must be brought by the student; he should have two double blankets, two pairs of sheets, three pillow-cases, and hand and bath towels; also a laundry bag. Laundering of the bed-linen and towels is done by the school: to avoid loss and confusion each student should have all his linen plainly marked with his full name. Napkins are furnished and laundered for boarders at the dining-hall; each student should bring a napkin-ring plainly marked with his name. Dormitory residents will find it convenient to have a bathrobe.

Opportunities for Self Support.—A limited opportunity to earn part of their expenses by labor about the Farm School may be offered to earnest students who are good workers. In general there is not enough work which can be done conveniently by students to supply the demand. Students should not come to the school expecting to earn a large part of their expenses. They should have enough funds to carry them until they become established in their work and acquainted with the opportunities for earning money.

Discipline.—Every student is expected to conduct himself at all times as a gentleman with due respect to the rights of his neighbors and of the community in which he lives, whether in the dormitory or outside.

Student Activities.—An association has been formed by the students of the Farm School for the support and control of all student activities. This organization is gradually developing along lines leading to student self-government. Its athletic branch arranges for interscholastic contests in various field sports. A student paper, *Agricola*, is published annually, at the close of the school year. A Glee Club has been established during the past year, and promises to become an important factor in student life.

Requirements for Graduation.—Are the completion of three years work of 120 credits in approved subjects; four months practice in approved commercial work; and presence at the Commencement exercises.

COURSE OF STUDY

NOTE.—The work is estimated in terms of “credits.” One credit is equivalent to one hour of class room or two hours of laboratory or practice work. In each semester the left-hand column indicates the number of one-hour periods, the middle column (in parenthesis) the number of two-hour periods, and the right-hand column the number of credits. By multiplying the total of the middle column by 2 and adding this number to the total of the first column the actual number of hours per week devoted to class work is obtained.

FIRST YEAR

(Same for all students)

<i>First Semester</i>			<i>Second Semester</i>		
Bot. 01, Plant life.....	2	(2) 4	Bot. 02, Plant classification	2	(2) 4
Chem. 01, Elements of Chemistry	2	(2) 4	Chem. 02, Chemical analysis	2	(2) 4
Eng. 01, Grammar and Rhetoric	4	4	Eng. 02, Agricultural literature	4	4
Math. 01, Arithmetic.....	4	4	Math. 02, Algebra and geometry	4	4
A. H. 01, Stock judging.....		(2) 2	A. H. 02, Stock judging.....		(2) 2
F. M. 01, Drawing.....		(2) 2	F. M. 02, Carpentry.....		(2) 2
Hyg. 01, Personal Hygiene..	1	1	Hyg. 02, First aid.....	1	1
	13	8 21		13	8 21

HORTICULTURE GROUP

SECOND YEAR

Math. 03, Applied Mathematics	4	4	Math. 04, Physics and trigonometry	2	2
F. M. 03, Building construction		(2) 2	F. M. 04, Forging.....		(2) 2
Agr. 01, Soils.....	2	(1) 3	Agr. 02, Farm crops.....	2	(1) 3
Hort. 01, Plant propagation and fruit growing.....	2	(2) 4	Hort. 02, Deciduous and small fruits.....	2	(2) 4
Ento. 01, Insect pests.....	2	(2) 4	P. P. 02, Plant diseases.....	2	(2) 4
			Chem. 04, Agricultural chemistry	2	2
	10	7 17		10	7 17

ELECTIVES

P. H. 01, Breeds and housing	2	(1) 3	P. H. 02, Care and feeding..	2	(1) 3
E. & H. 03, English elective	3	3	E. & H. 04, English elective	3	3
E. & H. 07, History elective	3	3	E. & H. 08, History elective	3	3

THIRD YEAR

E. & H. 011, Civics.....	3	3	E. & H. 012, Economics.....	3	3
I. & S. 01, Surveying and Irrigation	2 (2)	4	I. & S. 02, Irrigation prac- tice	1 (2)	3
Agr. 03, Farm management..	2 (1)	3	F. M. 06, Farm machinery....	2 (2)	4
Hort. 03, Fruit handling.....	2 (2)	4	Hort. 04, Vegetable garden- ing or Hort. 08.....	2 (2)	4
Hort. 05, Viticulture princi- ples	2 (1)	3	Hort. 06, Viticulture practice or Hort. 08.....	2 (1)	3
	11	6 17		10	7 17

ELECTIVES

E. & H. 05, English elective 3	3	Hort. 08, Citrus and semi- tropical fruits.....	2 (1)	3
E. & H. 09, History elective 3	3	E. & H. 06, English elective 3	3	
		E. & H. 010, History elective 3	3	

ANIMAL HUSBANDRY GROUP

SECOND YEAR

Math. 03, Applied mathema- tics	4	4	Math. 04, Physics and trigo- nometry	2	2
F. M. 03, Building construc- tion	(2)	2	F. M. 04, Forging.....	(2)	2
Agr. 01, Soils.....	2 (1)	3	Agr. 02, Farm crops.....	2 (1)	3
D. I. 01, Elements of dairy- ing	3 (1)	4	D. I. 02, Dairy practice.....	3 (1)	4
P. H. 01, Breeds and hous- ing	2 (1)	3	P. H. 02, Care and feeding..	2 (1)	3
A. H. 03, Breeds and judg- ing	2 (2)	4	A. H. 04, Breeds and judg- ing	2 (2)	4
	13	7 20	Chem. 04, Agricultural chem- istry	2	2
				13	7 20

ELECTIVES

Hort. 01, Deciduous fruits....	3 (3)	6	Hort. 02, Deciduous fruits....	3 (3)	6
Hort. 03, Small fruits.....	2 (2)	4	Hort. 04, Small fruits.....	2 (2)	4
E. & H. 03, English elective 3	3		E. & H. 04, English elective 3	3	
E. & H. 07, History elective 3	3		E. & H. 08, History elective 3	3	

THIRD YEAR

E. & H. 011, Civics.....	3	3	E. & H. 012, Economics.....	3	3
I. & S. 01, Surveying and Irrigation	2 (2)	4	I. & S. 02, Irrigation practice 1 (2)	3	
Agr. 03, Farm management..	2 (1)	3	F. M. 06, Farm machinery....	2 (2)	4
D. I. 03, Market milk.....	1 (1)	2	A. H. 06, Feeding practices..	2	2
A. H. 05, Feeding principles 2	2		V. S. 02, Veterinary science 1 (2)	3	
A. H. 09, Stock management 1 (2)	3			9	6 15
	11	6 17			

ELECTIVES

P. H. 03, Fancy judging.....	(2)	2	D. I. 04, Dairy manufactures	1	(1)	2
A. H. 07, Milk production....	2	2	P. H. 04, Incubation and			
E. & H. 05, English elective	3	3	brooding		(2)	2
E. & H. 09, History elective	3	3	E. & H. 06, English elective	3		3
			E. & H. 010, History elective	3		3

AGRONOMY

Professor J. W. GILMORE, Mr. JAMES KOEBER

These subjects treat of the origin and formation of soils, their relation to heat, moisture and air; plant food constituents; alkalies, effect of drainage, irrigation, mulches, fertilizers, crop rotations; the principal types, varieties and methods of growing common grain, forage and root crops; and a study of the business principles of farming; the organization and conduct of a farm; the planning of cropping systems, the handling of labor.

AGRICULTURAL BOTANY

Mr. C. J. WIGHT

Is a study of the formation, structure and conditions necessary for the growth of plants; identification and control of weeds; and the care of a small plot illustrating the botanical relationship of several groups of plants.

ANIMAL INDUSTRY

Professor GORDON H. TRUE, Assistant Professor J. I. THOMPSON,
Mr. C. R. GEORGE, Mr. E. C. VOORHEES

The study of animal breeding, the feeding, care and management of all classes of live stock; practice in judging the market and breed types; the calculation and feeding of balanced rations; systems of management and improvement.

CHEMISTRY

Mr. W. H. ARNOLD

The principles of chemistry and their application to soil fertility, fertilizers, dairy products, disinfectants, and other substances of interest to the farmer.

DAIRY INDUSTRY

Assistant Professor L. M. DAVIS, Mr. H. S. BAIRD, Mr. E. H. HAGEMANN

Study of the secretion, composition, and causes of variation in the composition of milk; methods of testing dairy products for butterfat, acidity, moisture, salt and adulteration; care and handling of milk from the stable to the kitchen; manufacture of butter, cheese and ice cream; methods of handling milk for retail distribution.

ENGLISH AND HISTORY

Mr. TRACEY R. KELLY

Emphasis will be placed upon the development of the student's ability to recognize correct English practice; to write and to express his own ideas, either in writing or orally, correctly, using where possible the study of agricultural literature, such as current experiment station publications and agricultural books. The form of expression and choice of words in business correspondence will also be considered. The elective subjects will include the English classics, American history and civics.

ENTOMOLOGY

Professor C. W. WOODWORTH, Mr. LESLIE NICKELS

The structure and classification of insect pests and methods for their control; practice in the handling of bees and a study of the apparatus used in bee keeping.

FARM MECHANICS

Mr. R. C. INGRIM, Mr. H. L. BOLTON, Mr. JAMES KOEBER

Practice work in the drawing of working plans and details of construction for farm buildings, practice in carpentry and blacksmith shops, and care of farm buildings; study of the principles underlying the construction, adjustment and operation of common tillage, and harvesting machinery, gas engines, tractors and pumps. Practice in setting up and operating farm machinery.

HORTICULTURE

Assistant Professor B. B. PRATT and Mr. R. H. TAYLOR

A study of fruits grown commercially in California, including the establishment and maintenance of orchards; practice in budding, grafting and spraying; coöperative methods of marketing.

HYGIENE

Dr. W. E. BATES

Study of physiology and personal hygiene, the importance of exercise, ventilation, sanitation; sexual hygiene; control of insect carriers of disease; emergency treatment of common accidents. Students completing this work will be recommended to the American Red Cross for First Aid Certificate.

IRRIGATION AND SURVEYING

Mr. S. H. BECKETT, Mr. C. M. TITUS, and Mr. O. W. ISRAELSON

Study of the principles of surveying and their application to irrigation, including methods and devices for water measurement; duty of water; preparation of land for irrigation; construction of laterals, head gates, delivery gates, concrete work, reservoirs, pumping units; irrigation practice.

MATHEMATICS

Mr. C. M. TITUS

Application of arithmetic through fractions and percentage and the elementary principles of algebra and geometry to the commercial operations common in ranch and business practice, such as the estimating of building materials, standardization of milk, computation of "overrun"; land measurement; capacities of reservoirs and ditches; computation of concrete work; use of formulas and logarithms.

PLANT PATHOLOGY

Assistant Professor W. T. HORNE and Mr. S. S. ROGERS

Study of the common diseases of cultivated crops and consideration of methods for their prevention and control; recognition of common plant diseases of this State; composition, preparation and uses of various sprays.

POULTRY HUSBANDRY

Assistant Professor J. I. DOUGHERTY

Study of more popular breeds of fowls, together with the principles of breeding and housing; incubating and brooding; judging of poultry; practice in the operation of incubators, brooders and record keeping .

VETERINARY SCIENCE

D. C. M. HARING and Dr. F. M. HAYES

This course deals with the preservation of the health of farm animals; the recognition of disease symptoms; the performance of operations necessary on a ranch.

VITICULTURE

Professor F. T. BIOLETTI and Mr. F. C. H. FLOSSFEDER

Structure of the vine; pruning, care and propagation; location and laying out of vineyards; grafting, callusing of vines; insect pests and diseases of the vine and methods of control.

SHORT COURSES

The Purpose of the Short Courses in Agriculture at the University Farm School is to afford opportunity for those particularly of mature years and ranch experience who for lack of time, preparation or means cannot take a longer course to acquire some knowledge of the application of science and the results of the latest investigations to practical ranch work in the production of fruits, grains and live stock of various classes. The rapidity with which the science of Agriculture has developed and the many ways in which ranch losses may be reduced and profits increased make it highly desirable for the up-to-date rancher to add to practical experience the fruits of the latest research. Not the least of the benefits of these Short Courses is the contact which the student has with other progressive men—leaders in their community—who have left their business for a short time to acquire that which may be of immediate use to them.

Six definite courses of study are offered. Each is distinct in itself and is planned to occupy all of the student's time. Upon the completion of one course, the student may take one of these courses immediately following it. The student's time is divided between class room, laboratory and field practice. The student may find it profitable to come back a second year rather than to spread his time over too wide a variety of subjects. Instruction in the Short Courses will be in charge of the regular corps of instructors of the College of Agriculture. While a four years' University course cannot be crowded into four to eight weeks, the purpose of the course is to afford that kind of training and instruction which shall be of immediate commercial value to the rancher.

The Six Courses offered during the fall of 1913 are

General Agriculture.....	Four weeks: September 29–October 25, 1913
Dairy Production.....	Four weeks: September 29–October 25, 1913
Dairy Manufactures.....	Eight weeks: September 29–November 22, 1913
Poultry Husbandry.....	Six weeks: September 29–November 8, 1913
Animal Husbandry.....	Two weeks: October 27–November 8, 1913
Horticulture and Viticulture.....	Three weeks: October 27–November 15, 1913

Combinations.—The following combinations are possible for those whose time permits:

- General Agriculture and Animal Husbandry.
- Or General Agriculture and Horticulture.
- Or Dairy Production and Animal Husbandry.
- Or Dairy Production and Horticulture.

Admission.—There are no entrance examinations and no restrictions as to sex, but applicants must be at least eighteen years of age.

Expenses.—*Board* may be secured at the dining hall of the University Farm for \$5 per week; rooms at the dormitories for from \$6 to \$10 per month. Similar prices prevail in the town of Davis.

Books and Special Clothing.—Dairy students are required to wear white suits which may be purchased in Davis at \$1 per suit, or brought from home. Other students will find it desirable to have overalls for working around stock and machinery. Books and other necessary supplies may be purchased in Davis.

Fees and Deposits.—A small fee is charged each student to cover cost of materials used in laboratories and demonstrations. In the courses which include milk testing a deposit for breakage is also charged but such portion as is not needed to pay for breakage is returned. The full fee and deposit for each course are to be paid whether the participant is present the whole or only part of the course except in Horticulture and Viticulture, where the minimum fee is \$2, if attendance is two weeks or less. The fees and deposits are as follows:

Animal Husbandry, fee \$2.

Dairy Farming, fee \$2, deposit \$3.

Dairy Manufactures, fee \$10, deposit \$5.

General Agriculture, fee \$2.

Horticulture, fee \$3.

Poultry Husbandry, fee \$5.

Railroad Rates.—Attendants upon the short courses may secure a round trip rate of one and one-third lowest first class fare on the receipt certificate plan from all stations on the Santa Fe and Southern Pacific and Western Pacific railroads in California including Reno, Nevada. Stop-over privileges may be secured on the going trip if the agent at initial point is asked for ticket allowing such privileges and by paying the regular stop-over fare. No stopovers are allowed on the return trip. In all cases ask for receipt-certificate when purchasing ticket to Davis.

SCHEDULE 1913 SHORT COURSES

NAMES AND DATES OF COURSES GIVEN AND HOURS ASSIGNED TO EACH SUBJECT

(NOTE—Animal Husbandry courses and Horticulture and Viticulture courses do not begin until October 27th.)

	General Agriculture Sep. 29-Oct. 25 4 weeks	Dairy Production Sep. 29-Oct. 25 4 weeks	Dairy Manufactures Sep. 29-No. 22 8 weeks	Poultry Husbandry Sep. 29-No. 8 6 weeks	Animal Husbandry Oct. 27-No. 8 2 weeks	Horticulture Viticulture Oc. 27-No. 15 3 weeks
Irrigation and Drainage	32	12	....	12	8	14
Forage Crops	24	16	8	18	8	....
Field Crops	24	8	....	12	....	28*
Soils and Fertilizers ..	32	12	....	12	....	28
Farm Mechanics	24	16	....	12	....	....
Farm Management..	8	....	....	....	....	....
General Horticulture..	8	....	....	12	....	28*
Animal Husbandry....	12	....	....	....	60	....
Live Stock Sanitation	4	....	....	....	....	....
Handling Milk and Cream....	....	24	....	....	....	....
Testing Dairy Products.....	....	24	48	....	....	....
Dairy Cattle .....	....	20	8	....	....	....
Dairy Cattle Judging .....	....	36	24	....	....	....
Veterinary Science .....	....	8	....	6	12	....
Dairy Manufactures	....	....	272	....	....	....
Dairy Bacteriology..	....	....	16	....	....	....
Poultry Husbandry....	....	....	....	186	....	....
Plant Propagation..	....	....	....	....	....	14
Deciduous Fruits .....	....	....	....	....	....	21
Citrus Fruits .....	....	....	....	....	....	14*
Vines and Olives .....	....	....	....	....	....	21*

* In the course in Horticulture and Viticulture the student is given a choice between the course in Field Crops and that in General Horticulture; also between the course in Citrus Fruits and that in Vines and Olives.

DESCRIPTION OF SUBJECTS

The student will note, in the above schedule, the total number of hours of time devoted to each subject. This time will be divided between lecture, laboratory and field work, with the view to giving the student the largest amount of useful instruction in the time available for the subject.

Animal Husbandry.—Lectures on the market types and breeds of beef cattle, hogs, sheep and horses; feeding, breeding and handling same; a study of the breed characteristics of the different animals; practice work in judging the various types of farm animals.

Citrus Fruits.—This course is designed to cover both the planting and general care of citrus orchards. Considerable time will be devoted to the matter of field practices including such items as cultural methods, cover crops, irrigation, fertilizers, and the control of insects and diseases.

Dairy Bacteriology.—Study of the bacterial contamination of milk by air, water, utensils, etc.; significance and control of fermentation in milk; bacteriology of butter-making and cheese-making.

Dairy Cattle.—Lectures upon the breeds of dairy cattle; their selection, feeding, management and breeding.

Dairy Cattle Judging.—Practice in judging and selecting dairy cattle.

Dairy Manufactures.—Lectures upon the secretion, composition and handling of milk; the operation of the Babcock test and other commercial tests; lectures and practice on separation, pasteurization and ripening of cream; production and use of starters; churning and moisture control in butter; manufacture of California and cheddar types of cheese; scoring of dairy products; ice cream making; creamery accounting; creamery management; dairy mechanics; including engines, boilers, motors, pumps and refrigeration.

Deciduous Fruits.—Propagation, culture, pruning, spraying and care of deciduous fruit trees. Practice in University Farm Orchards.

Farm Management.—A study of the adaptation of a farm to certain crops and types of farming; the planning of crops with reference to the maintenance of soil fertility; location of buildings; keeping of records; coöperation in marketing; different forms of land tenure.

Farm Mechanics.—A study of the farm implements and machinery which are applicable to California agriculture; practice work in handling gas engines and power machines; proper care, adjustment and use of farm equipment; factors concerned in the construction of farm buildings.

Field Crops.—Lectures covering the fundamental principles of the successful growing of grain; conservation of soil fertility in such land; crop rotation; dry land farming; practice work in the selection of seed; judging of grains.

Forage Crops.—Study of forage plants adaptable to California conditions, their nature, culture and value; practice work in seed selection.

General Horticulture.—Lectures on deciduous and small fruits designed to be of interest to the general farmer; a brief study of orchard pests and the means of overcoming them.

Handling Milk and Cream.—Lectures on milk and its production; the means of testing same; requirements for the production of market milk and cream; application of the Babcock test to dairy herds; practice in testing, operating separators, pasteurization, cooling and bottling milk.

Irrigation and Drainage.—Explanation of principles and use of the level; practice with level and rods in staking out fields; keeping notes and making calculations; preparation of land for irrigation; description of tools used in digging laterals and grading land; methods of applying water; conservation and duty of water; measurement of water by means of meters, weirs, floats, etc.; a study of irrigation constructions, such as head-gates, flumes and drops; the structure of soil and its relation to drainage; a study of drainage systems.

Live Stock Sanitation.—Use of disinfectants, serums, vaccines, etc., for the prevention of diseases; cause and symptoms of infectious diseases and means of combating the same.

Plant Propagation.—The principles and practice involved in plant propagation. Methods of developing plants from seeds, by cuttings, by layering, and by grafting and budding.

Poultry Husbandry.—Production, feeding and marketing of poultry; hatching and rearing of chicks; construction of poultry houses; judging of poultry; poultry management; incubating and brooding.

Soils and Fertilizers.—Lectures on the physical, chemical and bacteriological factors concerned in the production and maintenance of soil fertility; methods of preparation and cultivation of soils for different crops; relation of fertilizers to plants and soils; value and use of fertilizers.

Testing Dairy Products.—Practice in operating the Babcock test for butterfat; the use of the lactometer and acid test; moisture and salt tests of butter; testing for preservatives. In the Dairy Production Short Course the work will be limited to the testing of milk and cream.

Veterinary Science.—The care and treatment of sick animals; treatment for common diseases and ailments; minor operations; practice work bearing directly on the course given.

Vines and Olives.—An intensive course of lectures and demonstrations on grape and olive production will be provided. Special attention will be given to such matters as the choice and preparation of land for both the olive and grape, choice of stock, planting and care of vines and olive trees, pruning and grafting and control of diseases and insects. Methods of handling the grape and olive crop will be demonstrated and illustrated.



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Engineering.

The Annual Announcement of the Summer Session.

The Annual Announcement of the Colleges of Dentistry, Law,
Medicine and Pharmacy.

The President's Annual Report.